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10/824,493	04/15/2004	Sun-Chung Chen	A-9030	6580

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EXAMINER

PEYTON, TAMMARA R

ART UNIT	PAPER NUMBER
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2182

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/824,493

Applicant(s)

CHEN, SUN-CHUNG

Examiner

TAMMARA R. PEYTON

Art Unit

2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-8, 11, 12, 13, 17, and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore (US 2005/0052465) and Liaw et al., (US 2005/0066000).

As per claims 1, 11, and 12, Moore teaches a keyboard video mouse (KVM) switch for a plurality of computers to share a plurality of manipulating devices with different connection agreements, the KVM switch (Fig. 2, 116) comprising:

a plurality of first interfaces (Fig. 2, PS2) connected to the manipulating device to receive a plurality of first electrical signals ([0022]), where each of the electrical signals complies with the connection agreement of its source manipulating devices (Fig. 2, 118 and 120) and each of the first interfaces has a first converting device to convert the first electrical signals into a standard packet; (Fig. 2, 116, [0023])

a switch device (Fig. 2, 126, [0023]), which arranges the routing of the standard packets between the manipulating devices and the computers according to a path selection setting; and

a plurality of second interfaces (Fig. 2, 102) connected to the computers, where each of the second interfaces has a second converting device to convert the standard packets received from the switch device into a second electrical signal complying with the connection agreement of the connected computer. (Moore teaches a packet encoding device according to a path selection setting [0125] Lines 12 - 18 and [0136] Lines 3 - 5)

However, Moore fails to disclose a peripheral switch device that receives from a connected device having a source connection agreement and converting/manipulating that received data into a destination connection agreement wherein the connection agreements are different.

Nonetheless, Liaw discloses a peripheral switch device (The Matrix Switching Unit 1112 of fig. 1) comprises also at least one host USB peripheral interface (the USB port of UST I/O module 124, as discloses in paragraph 0065) and at least one USB peripheral interface that is neither a keyboard interface nor a mouse interface and wherein the keyboard interface and mouse interface could have a PS/2 connection (Liaw, [0065])

Moore and Liaw are analogous art because they are from the same field of endeavor of KVM (matrix) switching a plurality of peripheral devices.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the KVM switch as taught by Moore and to include also a

computer management system for coupling a plurality of remote computers (e.g., personal computers, servers, etc.) to one or more user workstations wherein the connected peripheral device can have more than one connection interface module as taught by Liaw.

The motivation for doing so would have been because Liaw teaches that ["This computer management system allows a system administrator to access a remote computer from one or more different types of peripheral devices (USB or PS/2), preferably located at the system administrator's desk, without physically traveling to the remote computer." (See [0023 and 0065])

As per claims 2 and 13, Moore teaches wherein each of the electrical signals is selected from the group comprising a keyboard signal and a mouse signal. (Moore; Figure 2 Items 118 and 120, Paragraph [0022] Lines 1 -4)

As per claim 3, 7, 17,19, and 20, Moore teaches wherein the KVM switch allows a plurality of local and remote computers to share a plurality of local manipulating devices, further Moore also teaches wherein the network device contains a network card (Moore; Figure 3 Item 146) which connects to the packet encoding and decoding device (Moore; Figure 3 Item 138); and a first port (Moore; Figure 3 [link between Items 144 and 146]); and a plurality of wireless ports (Moore; Paragraph [0134] Lines 5 - 11), one of which connects to the other KVM switch (Moore; Figure 2 Item 134) Further, Moore also teaches wherein the paths of the local and remote electrical signals are

switched by a CPU according to a path selection setting (Moore; Paragraph [0125] Lines 12- 18) and Paragraph [0136] Lines 3 -5)

As per claims 5, 6, and 21, Moore also teaches wherein the network packet transmitted to other KVM switches uses a CPU to perform encoding and decoding (Moore; Figure 5 Item 158, Paragraphs [0035] - [0036])

As per claim 8, Moore teaches wherein the network device further contains a 2-way switch connected to the second port for selecting between an Ethernet (a plurality of wireless ports (Moore; Paragraph [0134] Lines 5 - 11)), and another KVM switch. (Moore; Figure 2 Item 134)

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Publication No. 2005/0052465 (hereinafter Moore) in view of the Examiner's taking of Official Notice.

Moore does not explicitly teach wherein the interfaces contain UART's and a half-duplex processor.

However, the Examiner has taken Official Notice that UART's and half-duplex communications are well known in the art of data communications.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Moore to include the UART's and half-duplex communications because doing so allows the KVM to communicate with the attached peripherals and computers.

Claims 1-3, 5-8, 11, 12, 13, 17, and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore (US 2005/0052465) and Sandulescu et al., (US 2005/0216620).

As per claims 1, 11, and 12, Moore teaches a keyboard video mouse (KVM) switch for a plurality of computers to share a plurality of manipulating devices with different connection agreements, the KVM switch (Fig. 2, 116) comprising:

a plurality of first interfaces (Fig. 2, PS2) connected to the manipulating device to receive a plurality of first electrical signals ([0022]), where each of the electrical signals complies with the connection agreement of its source manipulating devices (Fig. 2, 118 and 120) and each of the first interfaces has a first converting device to convert the first electrical signals into a standard packet; (Fig. 2, 116, [0023])

a switch device (Fig. 2, 126, [0023]), which arranges the routing of the standard packets between the manipulating devices and the computers according to a path selection setting; and

a plurality of second interfaces (Fig. 2, 102) connected to the computers, where each of the second interfaces has a second converting device to convert the standard packets received from the switch device into a second electrical signal complying with the connection agreement of the connected computer. (Moore teaches a packet encoding device according to a path selection setting [0125] Lines 12 - 18 and [0136] Lines 3 - 5)

However, Moore fails to disclose a peripheral switch device that receives from a connected device having a source connection agreement and converting/manipulating that received data into a destination connection agreement wherein the connection agreements are different.

Nonetheless, Sandulescu discloses a peripheral switch device (100a, Fig. 1a,1b) comprises also at least one host USB peripheral interface (116a, Fig. 1a,1b), PS/2, MAC, SUN, (Fig. 2) and at least one USB, PS/2, MAC, or SUN host interface that is connected to either that corresponding keyboard (105x, 107x), [0069-0076])mouse interface (via 113a or USB peripheral via 116a). (Sandulescu, [0014-0068])

Moore and Sandulescu are analogous art because they are from the same field of endeavor of KVM (matrix) switching a plurality of peripheral devices.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the KVM switch as taught by Moore and to include also a computer management system for coupling a plurality of remote computers (e.g., personal computers, servers, etc.) to one or more user workstations the motivation for doing so would have been because Sandulescu teaches wherein the present invention relates to communication with peripheral devices and, more specifically, to a system and method for switching keyboard, video, mouse, and additional USB connections among different types of hosts as taught by Sandulescu.

As per 2, 3, 5-10, 13-17, and 19-21 please see the related rejections above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Publication No. 2005/0052465 (hereinafter Moore) and Liaw et al., (US 2005/0066000) or Sandulescu et al., (US 2005/0216620) and in further of view of US Patent No. 6,567,869 (hereinafter Shirley, cited as prior art 08/15/08).

As per claims 4 and 18, Moore - (Liaw or Sandulescu) does not teach wherein the network packet has a network overhead section. However, Shirley teaches a KVM switch that communicated using packets. The packets have a header section (Shirley; Col 3 Lines 19 - 24).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Moore-Liaw to include the network overhead section because doing so allows for identification of the recipient of the communication (Shirley; Col 3 Lines 19 - 24).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

The examiner requests, in response to this office action, support be shown for language added to any original claims on amendment and any new claims. That is, indicate support for newly added claim language by specifically pointing to page(s) and line number(s) in the specification and/or drawing figure(s). This will assist the examiner in prosecuting the application. When responding to this office action, applicant is advised to clearly point out the patentable novelty which he or she thinks the claims present, in view of the state of art disclosed by the references cited or the objections made. He or she must also show how the amendments avoid such references or objections. See 37 C.F.R. 1.136(c).

In amending in reply to a rejection of claims in an application or patent under reexamination, the applicant or patent owner must clearly point out the patentable novelty which he or she thinks the claims present in view the state of the art disclosed by the references cited or the objections made. The applicant or patent owner must also show how the amendments avoid such references or objections.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tammara Peyton whose telephone number is (571) 272-4157. The examiner can normally be reached between 6:30 - 4:00.

from Monday to Thursday, (I am off every first Friday), and 6:30-3:00 every second Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571) 272- 6729. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Any inquiry of a general nature of relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272- 2100.

/Tammara R Peyton/
Primary Examiner, Art Unit 2182
May 21, 2009